

The Relationship between Intrinsic/Extrinsic Motivation and Medical Students' L2 Writing

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Introduction

Writing skill has an important role in demonstrating the students' learning (Coffin et al., 2003). Although students are evaluated by what they write, writing is generally regarded as a difficult skill and a complex task (Graham, Harris, & Mason, 2005). Tan (2011) argues that writing is a difficult skill for native and non-native speakers because writers should balance various issues, such as content, organization, purpose, audience, vocabulary, punctuation, spelling, and mechanics. According to Nunan (2001), writing is a very complex procedure in which a great number of cognitive and meta-cognitive activities take place. Scarcella and Oxford (1992) state that writing in a second language (L2) helps L2 learners to improve their grammatical, strategic, socio-linguistic, and discourse competence in a foreign language. Manchón (2011) claims that L2 writing contributes to second language development; it helps the learners to perceive and understand new linguistic knowledge and improve automatism, knowledge integration and hypothesis testing. It is a facility in which students take power to create meaning as well as share their meaning. As a consequence, writing is more than just transferring one's thought to paper but it helps us to shape and refine our thinking.

One of the most important components that make up a writing task well is the students' motivation (Fazel & Ahmadi, 2011). Although a lot of research has been conducted in evaluating the students' writing (e.g. Arefi, 1997; Zia Houseini & Derakhshan, 2006; Kim, 2011; Knoch, 2009; Ayele, 2014), few studies have examined the role of motivation on students' L2 writing development. To fill this

gap, the present study aimed at investigating the effect of extrinsic and intrinsic motivation on Iranian medical students' L2 writing.

Motivation

Brown (2001) defines motivation as the intensity of one's impetus to learn. Motivation in the target language influences not only the amount of input learners receive but also the number of L2 learning strategies they use. To this end, motivation has a great impact on the extent to which learners learn a new language and maintain L2 skills after their studies (Oxford & Shearin, 1994).

There are various taxonomies of motivation. A common categorization of motivation is instrumental and integrative. The former refers to the situation in which the purpose of language learning is to gain a benefit such as getting a job or a higher payment while the latter refers to the situation in which the purpose of language learning is not to get a benefit from learning the language alone, but it is learned to be integrated in its language, culture, and people (Fazel & Ahmadi, 2011).

On the basis of another classification, motivation is divided into two types: intrinsic and extrinsic. Intrinsic motivation refers to the internal factors and learning of language alone. In contrast, extrinsic motivation is the purpose of getting something as an external factor like getting a prize. To make a relationship between the aforementioned classifications, it could be supposed that intrinsic motivation is related to integrative motivation while extrinsic one is related to instrumental motivation (Hassani, 2005). According to these definitions, the quality of the individual's experience and performance can be different when one is acting for intrinsic versus extrinsic reasons. In this perspective, Ryan and Deci (2000) re-examine the classic distinction between these two types of motivation. They define intrinsic motivation as doing something which is inherently interesting or enjoyable. For example, a student can be highly motivated to do his/her homework out of interest. It means that the student could be motivated to learn a new skill because he or she understands its value. Extrinsic motivation refers to doing something because it leads to a separable outcome. An illustration of this kind of motivation is the student who wants to get a good grade to obtain the consent of teachers or parents. In both examples, the nature and focus of the motivation vary while the amount of motivation is not necessarily different.

Motivation and learning

Some researchers investigate the role of motivation in the students' learning. For example, Dörnyei (1998) claims that intrinsic motivation might be negatively connected with different factors such as class anxiety. In contrast, it might be positively related to the students' educational motivation and self-evaluation of language skills.

In another study, Gardner and Lambert (1972) investigated the effect of integrative and instrumental motivation on L2 learners. The results of their study revealed that students with integrative motivation were more successful in learning than those with instrumental motivation. Contrary to Gardner and Lambert's expectations, Lukmani (1972) argues that although instrumental and integrative motivation are related to the learners' achievement, the former motivation is more highly correlated with the students' achievement in learning English than the latter one. Similarly, Vaezi (2008) claims that Iranian students have very high motivation and positive attitudes towards learning English and they are more instrumentally motivated. The two above-mentioned findings contrast with that of Moivaziri (2008) who claims that both integrative and instrumental motivations are related to the students' success in learning. The results of Moivaziri's studies are in the same line with those of Gardner and Lambert (1972) who investigated the effect of integrative and instrumental motivation on L2 learners. They found that students with integrative motivation (intrinsic motivation) are more successful in learning than those with instrumental motivation (extrinsic motivation).

According to Lukmani (1972), both instrumental and integrative motivations are related to the learners' achievement; however, the former is more highly correlated with the students' achievement in learning English than the latter one. The probable reason is that motivation to use and learn English has been predominantly driven by extrinsic desires for vocational or socioeconomic advancement (Lin, 1996; Bolton & Luke, 1999).

Motivation and writing

Some studies have shown that motivational factors have a great impact on the process and production of difficult tasks such as writing. They claim that the learner's motivation plays a significant role in determining how students will engage in writing activities, what kind of writing tasks they will handle, and how

much attempt and attention they will run through various phases of their writing process (Bruning & Horn, 2000). Kormos and Dörnyei (2004) refer to the task of motivation as a crucial factor that can affect the students' L2 writing. Another study shows that students with integrative motivation were more successful in writing as compared with those with instrumental motivation (Fazel & Ahmadi, 2011).

Although many studies have been conducted on improving the students' writing ability (e.g. Kim, 2011; Knoch, 2009; Ayele, 2014), to the best of our knowledge, the research on the relationship between the students' motivation and their L2 writing is scanty. Moreover, paradoxical results have been shown in the relationship between the students' motivation and their L2 writing. These are the main reasons that prompted us to conduct a research in this area. The current study is an attempt to investigate the relationship between intrinsic/extrinsic motivation and medical students' L2 writing. To do this, the following research questions were posed:

1. Is there a significant difference between the students' L2 writing scores and their motivation?
2. Is there a significant relationship between medical students' L2 writing scores and intrinsic motivation?
3. Is there a significant relationship between medical students' L2 writing scores and extrinsic motivation?

Method

Participants

One hundred EFL medical students (both males and females) participated in this study. They had enrolled in an English academic writing course held in English Language Department of Shiraz University of Medical Sciences. All medical students have to take the academic writing as a compulsory three credit course before graduating from the university. Due to a limitation in our sample size, we selected the students of five intact academic writing classes. All classes were taught based on the same writing syllabus.

Procedures and data collection

The writing class was held twice per week and each session took approximately 90 minutes. The main elements of the schedule were teaching grammar, teaching academic writing such as grammar, paragraph structure, paragraph development,

opinion paragraph, comparison/contrast paragraph, problem/solution paragraph and essay structure. The course took one semester. To identify the students' strengths and weaknesses, the researchers used ongoing assessments which mainly focused on writing paragraphs on various elements the students learned.

For data collection, the students were asked to write four essays in one semester. The time interval between writing each essay was three weeks.

Instruments

In this study, we applied the Holistic Scoring Rubric developed by Facione and Facione (2014) to assess the students' writing. It constructs four levels of performance to evaluate the students' writing ranging from strong (4) to significantly weak (1). Inter-rater reliability was applied by researchers to make objective judgment in their scoring.

Moreover, we administered a questionnaire to classify the students' extrinsic/intrinsic motivation. It was a five-point Likert-scale motivation questionnaire adopted from Laine (1987); it included 31 items in two main sections (i.e. extrinsic and intrinsic motivation). The reliability of the questionnaire was measured through test-retest by Fazel (2002). Its correlation coefficient was 0.80 which showed a positive correlation between the test items. In this study, to remove the ambiguity of the items and enhance the validity, we used the back-translation method to translate it into the Persian language. To do so, first, the questionnaire was translated into Persian. Then, the Persian version of the questionnaire was again translated into English without referring to the original text. Finally, the two English versions of the questionnaires were compared with one another by two experts in translation. They paid attention not only to the word by word translation of the text but also the underlying concepts that the items were intended to measure. Then, to remove the ambiguity in each item, we did a pilot study and the questionnaire was given to 30 university students who did not attend in the main study.

Data analysis and results

All students' manuscripts ($n = 200$) were scored by these researchers who had taught academic writing for more than three years. First, coding procedures were applied to examine the agreement between the raters. To do so, each researcher tried to mark the students' writing based on the Holistic Scoring Rubric individually. Since the inter-rater reliability was low in the first round (0.50), the researchers tried to enhance their agreement by consulting about discrepancies until the degree of agreement between them reached 0.78.

Furthermore, to investigate if there is a significant difference between the students' L2 writing scores and their motivation, one-way ANOVA was applied. As shown in Table 1, a significant difference was found between the students' L2 writing scores and their motivation. It means that the students who had intrinsic motivation got higher scores than those with extrinsic motivation.

Table 1. *Comparison of the Students' Writing Scores based on Two Types of Motivation*

motivation		df	Mean	F	Sig.
extrinsic	Between Groups	34	99.95	2.72	.000
	Within Groups	63	36.78		
intrinsic	Between Groups	33	166.11	2.62	.001
	Within Groups	62	63.37		
	Total	95			

Moreover, to investigate if there is a significant relationship between the medical students' writing scores and intrinsic motivation, Pearson Correlation was run. A significant relationship was found between their writing scores and intrinsic motivation (see Table 2).

Table 2. *Correlation between the Students' Writing Scores and Intrinsic Motivation*

Motivation		Intrinsic	Writing Score
Intrinsic	Pearson Correlation	0.309**	1
	Sig. (2-tailed)	0.002	
	N	94	96

Note: **. Correlation is significant at the 0.01 level (2-tailed)

Finally, we ran Pearson Correlation to investigate if there is a significant relationship between the medical students' writing scores and extrinsic motivation. No significant relationship was found between the medical students' writing scores and extrinsic motivation (see Table 3).

Table 3. *Correlation between the Students' Writing Scores and Extrinsic Motivation*

Motivation		Extrinsic	Writing Score
Extrinsic	Pearson Correlation	0.17	1
	Sig. (2-tailed)	0.11	
	N	96	98

Discussion

This study was an attempt to investigate the relationship between intrinsic/extrinsic motivation and medical students' L2 writing. We found that the students' motivation has a positive effect on their writing. This finding is in accordance with Fazel and Ahmadi's (2011) study who found a significant relationship between instrumental (extrinsic)/integrative (intrinsic) motivation and writing proficiency among Iranian IELTS candidates.

Moreover, a significant difference between the students' L2 writing scores and their motivation confirms the results of previous research indicating that motivation is essential in the second language learning and teaching. This finding can support other researchers' ideas that various types of motivations such as integrative and instrumental can enhance the students' learning (Moiinvaziri, 2008). Also, motivation is not only an essential element of successful language acquisition but also a dynamic process subject to continuous changes in the students' learning (Doˆrnyei, 2001). Our findings are also inconsistent with those of other studies that showed a significant relationship between the students' level of English language proficiency and their motivation (Bagherzadeh & Azizi, 2012; Langroudi & Amiri, 2013). This finding may imply that the learner's motivation plays a significant role in determining how students engage in writing activities, what kind of writing tasks they handle, and how much attempt and attention they run through the various phases of the writing process (Bruning & Horn, 2000).

In this study, a significant relationship was found between the medical students' writing scores and their intrinsic motivation. The results are consistent with those of Gardner and Lambert's (1972) who found that students with integrative motivation (intrinsic motivation) were more successful in learning than those with instrumental motivation (extrinsic motivation). Contrary to Gardner and Lambert's expectations and also in contradiction to our findings, Lukmani (1972) argues that although instrumental and integrative motivation are related to the learners' achievement, the former is more highly correlated with the students' achievement in learning English than the latter.

Another important finding was that intrinsic motivation affects the students' writing scores more than extrinsic one. Our finding contradicted the results reported by Burstall (1975) who argued that both integrative and instrumental motivation had the same effect on the students' success in language learning. A possible explanation for this finding is that medical students who took part in this study were more motivated to do their homework out of their own interest than thinking of getting good marks. This finding does not support the previous research indicating that achieving good grades in examinations could greatly influence the students' writing (Fan, 1999).

Another remarkable finding was that the students figured out the value of writing and considered writing task as doing something inherently exciting or pleasant. This finding is inconsistent with other studies showing that the students' motivation in learning English has been basically driven by extrinsic factors such as vocational and socioeconomic (Bolton & Luke, 1999; Lin (1996) or studying abroad (Fan, 1999; Lin & Detaramani, 1998; Hoosain, 2005; Lo & Hyland, 2007).

Conclusion

Limited work has been done to determine the relationship between the students' motivation and their L2 writing skill. The present research found that the students' motivation is essential in improving their L2 writing skill. Comparing the students' intrinsic and extrinsic motivation, we found that students with intrinsic motivation were more successful than those with extrinsic motivation in L2 writing.

The results of this study can give teachers an in-depth understanding of motivation as a key factor which can improve students' writing. In fact, identifying the relationship between students' motivation and L2 writing can assist teachers in fostering positive and realistic beliefs to maximize their teaching. The results can also help teachers in general and Iranian EFL teachers in particular to be more efficient in their career. They may help EFL students deal with L2 writing with an awareness of motivation in their education.

In this study, we investigated the relationship between students' motivation and their L2 writing skills; investigating the relationship between the students' motivation and learning other skills such as reading, speaking and reading is strongly recommended. Next, this study was conducted on the students of only one university; the result may threaten the external validity and also restrict the generalizability of the findings to the whole population. What is required is another study with a larger population. Next, in this study, we did not consider the impact

of culture on students' L2 writing. Cross-cultural studies on the relationship between students' motivation and their L2 writing skill are suggested. Last but not least, further work needs to be done to examine if other variables such as students' age, sex, language proficiency and the length of exposure to the language may affect students' motivations in L2 writing.

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Summary

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Despite the increasing interest in the need to increase the students' learning motivation, there have been few attempts to determine the relationship between the students' motivation and their L2 writing skill. The present study aimed at investigating the effect of extrinsic and intrinsic motivation on Iranian medical students' L2 writing. 100 EFL medical students (both males and females) who had enrolled in an English academic writing course held in English Language Department of Shiraz University of Medical Sciences participated in this study. We used a questionnaire to classify the students' extrinsic/intrinsic motivation. The results showed that the students' motivation has a positive effect on their writing. Moreover, students with intrinsic motivation were more successful than those with extrinsic motivation in L2 writing. This study can provide the instructors with an in-depth understanding of motivation as a key factor which can improve the students' writing. Understanding different types of students' motivation and what promotes their learning skill can assist the teachers in fostering positive and realistic beliefs to maximize their teaching in an educational setting.

Keywords: extrinsic motivation; intrinsic motivation; L2 writing; medical students